RIVER BEND STATION
50-458
FAXED 7/19/02
Attachment

NEDC-33051P

Executive summary

On page S-2 it is stated that " the evaluations were conducted in accordance with the criteria of TLTR Appendix B." But item No. 11 in the TLTR Appendix B concerning review of UFSAR is not addressed. Add item No. 11 to the list to confirm that the UFSAR review was performed for TPO.

(1) 1.1 Overview

Reference is made to BWR Thermal Power Optimization (TPO) report NEDC-32938P which is under staff review for evaluations of several sections in the River Bend Station (RBS) report. However, the TPO report covers power uprate to 1.5 % only. Additional evaluations are required to support the RBS application. In some cases, reference to TPO with 1.5% may be still valid. Other cases, TPO reference may not be valid. Identify the areas where the TPO is not valid and provides the bases for the additional .2% power uprate.

(2) 1.2.1 TPO Analysis Basis

It is stated that "Some analyses may be performed at 100% TPO RTP(101.7% of CLTP), because the uncertainty factor is accounted for in the methods, or the additional 2% margin is not required(e.g. ATWS)". Describe in detail which methods and which analyses. How much margin is there for ATWS analysis at present? What are the parameters which got the 2% margin?

Generic TPO ATWS evaluations are based on GE methodology and GE fuel. Discuss the impact of Framatome fuel in the ATWS analyses.

(3) 1.2.2 Margins Table 1-1

List of Computer Codes used for TPO Analyses is incomplete. Include all applicable codes, both GE and Framatome evaluation models.

(4) 1.3.2 Reactor Performance Improvement Features

Confirm that the analyses performed for reactor performance improvement features bounds 101.7 power level.

(5) Table 1-3 Summary of Effect of TPO Uprate on Licensing Criteria

It is stated that for ATWS peak vessel pressure, effect of 1.7% power increase is less than 20 psig. Confirm that this is true. For Pressure Regulator Failure event, the pressure increase may be more than 20 psig.

(6) 2.1 Fuel Design and operation

Describe the current operating Cycle 11 mix core. How many GE 11 fuel bundles and how many Framatome fuel bundles are in the core now and in the next Cycle when the TPO is implemented?

(7) 2.4 Stability

Refer NEDO-31960-A and NEDO -32339A to support Option 1A.

Confirm that RPV level control strategy includes lowering the vessel level below the feedwater sparger.

(8) Reactivity Control

In the staff ELTR-2 SER it is stated that "the plant specific submittal for BWR/6 plants must provide assurance that the scram insertion speeds used in the transient analyses are slower than the requirements in the plant TSs." Confirm that this is true for Grand Gulf.

Describe in detail the "CONTRANSA2" methodology and the relation to control rod velocity, steam pressure and control rod position. If there is no pressure increase for TPO uprate, how additional pressurization can takes place?

(9) 3.1 Nuclear system pressure relief/overpressure protection

Identify the GE/Framatome approved methodology and refer the analyses given in the reload analyses.

These analyses assumed no valve out of service options. But in section a 1.3.2,Performance improvement feature, seven safety relief valves out of service and 3% S.V. set point tolerance evaluations are mentioned. Clarify why these two analyses are inconsistent.

(10) 3.6 Reactor Recirculation System

What is the licensed maximum core flow for RBS? Discuss the pump NPSH and the cavitation interlock aspects.

(11) 4.3 Emergency Core Cooling System Performance

Framatome methodology used for the LOCA analyses is not discussed. How 10 CFR 50.46 criteria is met? What is the PCT? What is the limiting break? More discussion is required.

Which is the analysis of record for LOCA analysis? Is it GE analysis or Framatome analysis or both?

(12) 5.3.2 TSV Closure Scram, TCV Fast Closure Scram, and Recirculation Pump Trip Bypasses

It is stated " The AL for the TFSP that activates the T/G trip scram and RPT at high power remains the same value in terms of percent RTP. This is contrary to TLTR Section F.4.2.3, which states that the AL would remain the same in terms of absolute main steam turbine steam flow (lb/hr), and indicated as a pressure signal (psig)."

Since this is a deviation from the TLTR, more detailed description is required.